

Wicomico leaders hope gasification plant will be covered privately

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THE COST

Gasification facilities survive financially on fees from operations. In traditional waste-to-energy plants, the process of handling and burning trash costs about \$100 per ton.

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SALISBURY — If Wicomico County officials have their way, a private company will assume the cost of building a \$75 million plant that would vaporize household garbage, turning it into energy-producing gas.

Proceeds from collecting trash and selling energy would offset that hefty investment over time, Public Works Director Lee Beauchamp said. His goal at this early stage of examining the "gasification" technology, he added, is to spare the county from spending its own money on the project.

In many ways, the county finds itself venturing into uncharted territory. The technology behind gasification is centuries old but has been used to process municipal waste only rarely worldwide and never in the United States.

The county could get its way after all, according to waste-management industry experts. But no one can say for sure whether it will realize its dream of financing the project entirely with private money.

"It all depends on various factors," said Charles Mussche, a research associate at Columbia University and consultant to its Waste-to-Energy Research and Technology Council.

Such facilities survive financially on a steady diet of fees from operations. In traditional waste-to-energy plants, the process of handling and burning trash costs about \$100 per ton, Mussche said.

Wicomico's tipping fee, the price of processing garbage by the ton, stands at \$60 per ton. So whoever builds and operates the plant would have to earn another \$40 from selling energy and recyclables to break even.

The energy price, Mussche said, "depends on negotiations with utility companies."

Generally speaking, he added, gasification projects sprout in "very affluent communities who are concerned about their environment and are willing to pay a little more for their tipping fee."

Beauchamp and other advocates say the technology would have several benefits in Wicomico.

The plant would extend the life of the county's landfill, which faces a space crunch within 30 years, Beauchamp said in his initial presentation on the idea to the County Council last month. The vaporization process would leave behind an ash representing 3-5 percent of the original size of the garbage.

Chicken manure, a poultry industry byproduct at the center of a regulatory debate in Maryland, could be

trucked to the facility and vaporized for fuel, he said. That could spare farmers from simply throwing away the manure, if new rules prevent them from spreading it on their fields to reduce Chesapeake Bay pollution.-

The process is similar to traditional waste-to-energy incinerators with one key exception: It uses very little oxygen. The material technically isn't burned, dramatically reducing air pollutants, advocates say.

The main products of the process are hydrogen and carbon monoxide, the components of synthetic gas, or "syngas." But it must undergo another step before it becomes energy or fuel — and that, critics say, is where the process gets dirty.

Some municipal-scale gasification plants have been built, most notably in Sweden and Japan. Despite interest from dozens of jurisdictions across the U.S., concerns over the pollution and financial sustainability have nixed the projects in the planning stages.

In Wicomico, officials are paying \$27,000 to a Fairfax, Va.,-based waste-management consultant to help draft a request for bids for the plant's development.-

"It's very early to tell" who will pay for the plant, Beauchamp said recently. "As part of our due diligence, we intend to explore the whole gamut of financing."

It's difficult for companies to finance the projects on their own because of uncertainty over their ability to recoup their sizable investment, said Mike Webb of Nashville-based PHG Energy, which builds and operates gasification systems.

"It can be done," he said. "You're talking about a lot of money, and you're talking about a lot of risk. Are you sure that over the next 20 years that you're going to have enough feedstock to feed this machine? It all comes down to who's putting up the money and who's taking on the risk."

The city of Covington, Tenn., fronted \$2 million to build the PHG-run gasification plant. It processes wood chips and sewage sludge, producing energy to run the water treatment plant.

Municipal-waste gasification plants typically use energy-consuming "plasma" technology, which is expensive but effective at vaporizing anything put into it. Wicomico could choose to save on operating costs and operate at a lower heat, but plastics and metals would have to be culled from the waste stream, Webb said.

It's much easier for public entities to get financing than private companies for such projects, he added. Lenders know government jurisdictions can fall back on raising taxes to recoup their losses if the plant fails; most private companies don't have that kind of collateral at their disposal.-

Whatever happens in Wicomico, the industry will be watching closely, Webb said.